



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/723,804

11/26/2003

Daniel G. Borkowski

Intel-007PUS

7999

7590 04/30/2007  
Daly, Crowley & Mofford, LLP  
c/o PortfolioIP  
P.O. Box 52050  
Minneapolis, MN 55402

EXAMINER

HAILU, KIBROM T

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

04/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/723,804	Applicant(s) BORKOWSKI ET AL.	
	Examiner Kibrom T. Hailu	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 13-31 is/are rejected.
- 7) ☒ Claim(s) 7-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 13, 18-14, and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson (US 5,005,170).

**Regarding claim 1**, Nelson discloses a method comprising: receiving successive frames (frames 300, see fig.s 3 and 5) carrying data in timeslots (fig.s 3 and 5, illustrate a frame 300 is carried by time slots 301), the timeslots being assigned to channels (col. 6, lines 35-44, subchannels or signal streams are assigned time slots 301) so that data for the channels comprises interleaved data (col. 7, lines 56-60, distributed or arranged in noncontiguous way); aggregating the data from successive frames for each of a predetermined number of the timeslots (col. 7, lines 38-41); mapping the aggregated data, by timeslot, to produce a timeslot-based map (col. 8, lines 51-68); and remapping the aggregated data in the timeslot-based map to produce a channel-based map (col. 10, lines 18-31; col. 4, lines 24-46).

**Regarding claims 20, 22 and 30**, the claimed article, network processor and system include the features corresponding to the subject matter mentioned above in the rejection claim 1 is applicable here too. The multiplexers 17 and switch 18 are process-controlled machines and include storages or memories, and central processing units (processors) to execute the stored instructions or routines (col. 8, lines 31-36).

**Regarding claims 2, 21, 23 and 31,** Nelson discloses in the channel-based map, the data for the channels are grouped together, by channel, in the order in which the data were received (fig. 9; col. 11, lines 49-68, illustrates the consecutively received data for channels are grouped together by channels).

**Regarding claim 3,** Nelson discloses remapping comprises: using timeslot-remap information to re-order the aggregated data stored in the timeslot-based map (col. 8, lines 12-26; col. 3, lines 32-37, based on timeslot-remap or sequence of the subchannel's information carried by the timeslots from the source to destination, the switch 18 demultiplexes and remultiplexes or reorders the bytes 310, i.e., the timeslots 301, of the subchannel...).

**Regarding claim 4,** Nelson discloses mapping comprises storing the aggregated data in a first buffer and wherein remapping comprises storing the aggregated data stored in the first buffer in a second buffer according to the timeslot-remap information (col. 8, lines 31-36, the multiplexers 17 and the switch 18 have memories that store the mapped and remapped data retrieved by their respective routines).

**Regarding claim 5,** Nelson discloses the timeslot-remap information comprises a table, and the table includes an address and an increment value associated with each of the timeslots in a frame (col. 9, lines 14-21, 41-45; col. 9, lines 22-33; col. 10, lines 2-5 multiplexer 17 includes an assignment table which uses to identify the user link or address. The table is also coupled or associated with the routines and the counter. The counter has an increment value, which increases based on the information of the timeslots that are sequentially recorded in the table. It is also obvious to realize that the switch 18 includes assignment table).

Art Unit: 2616

**Regarding claim 6**, Nelson discloses remapping comprises remapping the aggregated data for each timeslot, in sequential order (col. 3, lines 15-24, 32-37).

**Regarding claims 13 and 24**, Nelson discloses the successive frames are T1 frames (col. 5, lines 10-14).

**Regarding claims 18 and 29**, Nelson discloses the data comprises interleaved data and non-interleaved data (see fig. 5).

**Regarding claim 19**, Nelson discloses a method comprising: providing a channel-based map in which data are grouped together by channel; remapping the channel-based map to produce a timeslot-based map in which data to be transmitted in a number of consecutive frames over a serial link are grouped together by timeslot (fig. 9; col. 4, lines 24-46; col. 11, lines 49-68).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2616

5. Claims 14, 15, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Shepherd et al. (US 7,061,884 B2).

**Regarding claims 14, 15, 25 and 26**, Nelson doesn't disclose the successive frames are E1 and J1 frames.

Shepherd teaches the successive frames are E1 and J1 frames (col. 3, lines 3-4; col. 8, lines 51-55; col. 9, lines 5-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the E1 and J1 carrier links or frames of Shepherds into the mapping method and system of Nelson so that communication would be supported different amount of channels and/or timeslots according to different standards or protocols of respective countries.

6. Claims 16, 17, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Bisson et al. (US 6,965,619 B2).

**Regarding claims 16, 17, 27 and 28**, Nelson doesn't explicitly disclose the data includes High-Level Data Link Control and Asynchronous Transfer Mode data.

Bisson teaches the data includes High-Level Data Link Control and Asynchronous Transfer Mode data (col. 4, lines 47-55 and col. 1, lines 36-42, respectively).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to use the HDLC and ATM data or packets of Bisson into the mapping method and system of Nelson in order economically transport data over a wider area while achieving predictability with respect to the parameters (e.g. latency and bandwidth) of the link (Bisson, col. 1, lines 49-53).

Art Unit: 2616

*Allowable Subject Matter*

7. Claim 7-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom T. Hailu whose telephone number is (571)270-1209. The examiner can normally be reached on Monday-Thursday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER